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FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			EXAMINER BOATENG, ALEXIS ASIEDUA	
			ART UNIT 2838	PAPER NUMBER

DATE MAILED: 02/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/725,021

Applicant(s)

KIM ET AL.

Examiner

Alexis Boateng

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on 25 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 3, and 14 rejected under 35 U.S.C. 102(b) as being anticipated by Kaite (U.S. 5,808,442).

**Regarding claim 1**, Kaite discloses a method a charging a method of charging a plurality of batteries comprising:

charging a first battery with a constant current until a voltage of said first battery becomes greater than a reference voltage (figure 2 items 1 and 2 and figure 3 item 2);

charging a second battery with a constant current until a voltage of said second battery becomes greater than a reference voltage (figure 2 item 2 and figure 3 item 2);

resuming charging of said first battery until one of a charging current is less than a reference current or the charging current is less than a limit current indicating a state of full charge (column 2 lines 55 thru 58); that is, reducing the current after a full charge means that the reference current or limit current is some amount above that reduced amount

resuming charging of said second battery until one of a charging current is less than a reference current and the charging current is less than a limit current indicating a state of full charge (column 2 lines 55 thru 58); see remarks above

**Regarding claim 2**, wherein said reference voltage is between approximately 70% and approximately 80% of full charging voltage (column 2 lines 55 thru 58).

**Regarding claim 3**, wherein said reference current is a current value at a time of approximately 80% of full charging voltage (column 2 lines 55 thru 58).

**Regarding claim 14**, Kaite discloses identifying a charging voltage/current characteristic of at least one of the plurality of batteries; (column 1 line 66 thru column 2 lines 1 thru 7);

charging the first battery based on a first charging voltage/current characteristic of said first battery (column 7 lines 36 thru 40);

charging the second battery based on a first charging voltage/current characteristic of said second battery (column 7 lines 42 thru 46);

stopping charging of the first battery based on a second charging voltage/current characteristic of said first battery (column 2 lines 19 thru 23);

complete charging of one of the first battery and the second battery based on the voltage/current characteristic of said one of the first battery and the second battery (column 7 lines 48 thru 51).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 5 - 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oyamada (U.S. 4,387,332) in view Fujii (U.S. 6,160,377).

**Regarding claim 5**, Oyamada discloses a method of charging a plurality of batteries comprising (column 1 lines 7 thru 11):

alternatively charging each of a plurality of batteries (column 1 lines 67 and 68 and column 2 lines 1 and 2) until a charging voltage of each of said plurality of batteries becomes a reference voltage (column 2 lines 15 thru 22). Oyamada discloses the invention as defined, but does not disclose wherein resuming charging the first battery until a charging current of the first battery is less than a reference current; and further resuming charging of the battery until said charging current of the first battery is less than a limit current indicating a full state of charge. Fujii discloses in column 11 lines 20 thru 51 that the battery is continuously charging until it reaches a charging current ratio of 90%. Fujii further discloses in column 11 lines 52 thru 57, that the controller uses this percentage of charging current to determine when to stop charging the battery. At the time of invention, it would have been obvious to a person of ordinary skill in the art to design the battery charger to cease charging when the charging current becomes lower than a predetermined value so that it does not overcharge and destroy the battery.

**Regarding claim 6**, Oyamada does not disclose resuming charging of the second battery until a charging current of the second battery is less than a reference current. Fujii discloses in column 11 lines 20 thru 51 that the battery is continuously charging until it reaches a charging current ratio of 90%. Fujii further discloses in column 11 lines 52 thru 57, that the controller uses this percentage of charging current to determine when to stop charging the battery. At the time of invention, it would have

been obvious to a person of ordinary skill in the art to design the battery charger to cease charging when the charging current becomes lower than a predetermined value so that it does not overcharge and destroy the battery.

**Regarding claim 7,** Oyamada does not disclose resuming charging of the second battery until the charging current of the second battery is less than a limit current indicating a state of full charge. Fujii discloses in column 11 lines 20 thru 51 that the battery is continuously charging until it reaches a charging current ratio of 90%. Fujii further discloses in column 11 lines 52 thru 57, that the controller uses this percentage of charging current to determine stop charging of the battery. At the time of invention, it would have been obvious to a person of ordinary skill in the art to design the battery charger to cease charging when the charging current becomes lower than a predetermined value so that it does not overcharge and destroy the battery.

**Regarding claim 8,** Oyamada disclose the invention as defined in claim 5, but does not disclose wherein charging a first battery with a constant current until a charging voltage becomes a first reference voltage; charging a second battery with a constant current until a charging voltage becomes a second reference voltage; charging a third battery with a constant current until a charging voltage becomes a third reference voltage; charging a fourth battery with a constant current until a charging voltage becomes a fourth reference voltage. Fujii discloses in column 14 line 55 thru 66, that charging voltage is used to determine when to stop charging one battery and resume charging another. Fujii further discloses in column 12 lines 35 thru 39, that the aforementioned methods can be used if there are three battery packs or more. At the time of invention, it would have been obvious to a person of ordinary

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skill in the art to charge the batteries to a reference voltage so that overcharge is prevented and so that charging time can be decreased.

5. Claims 9 - 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oyamada (U.S. 4,387,332) in view of in view Fujii (U.S. 6,160,377) as applied to claim 5, and in further view of You (U.S. 6,777,913).

**Regarding claims 9 – 10**, neither Oyamada nor Fujii disclose the invention resuming charging of the second battery until a charging current of the second battery is less than a reference current. You discloses in column 4 lines 38 thru 50 that a dual charging operation where a battery unit current is checked periodically and another battery is charged when the current is less than threshold. It would have been obvious to a person having ordinary skill in the art to modify Fujii's charging method and monitor charging current in one battery unit and resume charging in another unit as taught by You in order to shorten charging time.

6. Claims 11 - 13, are rejected under 35 U.S.C. 103(a) as being unpatentable over Oyamada (U.S. 4,387,332) in view of Fujii (U.S. 6,160,377) as applied to claim 5, and further view of Kaite (U.S. 5,808,442).

**Regarding claim 11 – 13**, Neither Oyamada nor Fujii explicitly disclose the reference values used for charging. Kaite discloses in column 2 lines 55 thru 61 that the batteries are charged with a constant voltage to 80% of the full charge. Further, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. At the time of invention, it would have been obvious to a person of ordinary skill in the art to set the reference voltage from 70% to 80% so as to prevent the battery from being overcharged.

7. Claims 15 – 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaite (U.S. 5,808,442) in view of Tamai (U.S. 5,637,979).

**Regarding claim 15**, Kaite discloses the invention as defined in claim 14, but does not disclose wherein said charging voltage/current characteristic has one of a voltage gradient and a current gradient according to a charging voltage/current of said first battery. Tamai discloses in figure 9 a graph showing voltage and current characteristics having a voltage and current gradient according to the charging of the first battery. At the time of invention, it would have been obvious to a person of ordinary skill in the art to find the voltage and current gradient because it provides important information about the battery's performance.

**Regarding claim 16**, Kaite does not disclose wherein said voltage of said first battery gradually rises, said current goes to a constant current then said current gradient goes to substantially zero, thereby said voltage of said first battery having a predetermined gradient, and wherein when said first battery is charged by some degree of charging, said current drops, said current gradient has a negative value, and then said first battery has a constant voltage zone, thereby said voltage of said voltage being substantially zero. Tamai discloses in figure 9 a graph showing wherein the voltage gradually rises, the current goes to a constant current and then the current gradient goes to substantially zero, thereby said voltage of said first battery having a predetermined gradient and wherein when said first battery is charged by some degree of charging, said current drops, said current gradient has a negative value, and then said first battery has a constant voltage zone, thereby said



voltage of said voltage being substantially zero. At the time of invention, it would have been obvious for the Kaite charging system to implement Tamai's system because it provides accurate information of the rates of charging the battery, which is necessary to optimize charging performance.

**Regarding claims 17 – 18,** Kaite does not disclose the method wherein said first charging voltage/current characteristic, said voltage gradient is more than zero and a charging voltage has a reference of approximately 4.0 V and wherein a charging current has references of approximately 100mA and approximately 200mA. Tamai discloses in figure 9 wherein said first charging voltage/current characteristic, said voltage gradient is more than zero, which shows that there is an increase in charging, but does not disclose wherein a charging voltage has a reference of approximately 4.0 V and wherein a charging current has references of approximately 100mA and approximately 200mA. At the time of invention, it would have been obvious to a person of ordinary skill in the art to have the voltage gradient to be more than zero so that the voltage rate of charge increases, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

**Regarding claim 19,** Kaite does not disclose wherein said first battery charging said voltage gradient of said first battery is not more than zero, and a charging voltage of said first battery is not more than approximately 4.0V, and wherein if said voltage gradient is not more than zero and said charging current is more than approximately 100mA and not less than approximately 200mA, then said first battery is charged and said second battery is not charged. Tamai discloses in figure 9 wherein said

first battery charging said voltage gradient of said first battery is not more than zero, which shows that there is an increase in charging, but does not disclose wherein a charging voltage of said first battery is not more than approximately 4.0V, and wherein if said voltage gradient is not more than zero and said charging current is not more than approximately 100mA and not less than approximately 200mA. At the time of invention, it would have been obvious to a person of ordinary skill in the art to have the voltage gradient to be more than zero so that the voltage rate of charge increases, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

**Regarding claims 20 – 23**, Kaite does not disclose the wherein said second battery charging, said voltage gradient of said second battery is more than zero, and a charging voltage of said second battery is not more than approximately 4.0V; and wherein if said voltage gradient is not more than zero and said charging current is more than approximately 100mA and not less than approximately 200mA, then said secondary battery is charged and said first battery is not charged. Tamai discloses in figure 9 wherein said second battery charging, said voltage gradient of said second battery is more than zero, which shows that there is an increase in charging, but does not disclose a charging voltage of said second battery is not more than approximately 4.0V; and wherein if said voltage gradient is not more than zero and said charging current is not more than approximately 100mA and not less than approximately 200mA, then said secondary battery is charged and said first battery is not charged. At the time of invention, it would have been obvious to a person of ordinary skill in the art to have the voltage gradient to be more than zero so that the

voltage rate of charge increases, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

**Regarding claim 24**, Kaite does not disclose wherein in said first battery charging, a voltage and a current are an initial rising voltage and an initial constant current applied to said first battery, respectively. Tamai discloses in figure 9 wherein the applied charge to the first battery is an initial rising voltage and an initial constant current, so that an overcharge of current is prevented and the voltage is regulated to a certain level. At the time of invention, it would have been obvious to a person of ordinary skill in the art to implement the first battery's charging as a rising voltage and a constant current so that an overcharge of current is prevented and a simpler method regulating the voltage is provided.

8. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art in view of Fiebig (U.S. 5,539,297).

**Regarding claim 25**, The prior art figure 3 discloses a first circuit to apply least one of constant voltage and constant current to a first battery; a second circuit to apply at least one of constant voltage and constant current to a second battery. The prior art figure 3 discloses the invention as defined, but does not disclose a control circuit to control operations of the first circuit and the second circuit such that the first battery and the second battery are alternatively charged and such that the first battery and the second battery is charged based on charging voltage/current characteristics of the second battery. Fiebig discloses in figure 1 item 5, a control circuit that controls operations of the first circuit and second circuit. Fiebig further discloses in figure 2 a graphical illustration of the charging sequence showing that they are alternately

charged. Fiebig discloses in column 3 line 52 and in column 4 lines 19 thru 22 that current and voltage are detected and measured then batteries are charged in response to the given parameter. At the time of invention, it would have been obvious to a person of ordinary skill in the art to design the control circuit to control operations of the first and second circuit and alternately charge the batteries based on charging voltage/current characteristics because it is a safer mode of charging and ensures a shorter charge time period.

9. Claim 26, 27, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art in view of Fiebig (U.S. 5,539,297) in further view of Kaite (U.S. 5,808,442).

**Regarding claim 26**, the prior art and Fiebig do not disclose wherein the charging voltage/current characteristics relate to a reference voltage. Kaite discloses in column 3 lines 34 thru 41 using a reference voltage as a charging characteristic to give priority to batteries, because the voltage level can provide important information on the state of health and capacity of battery. At the time of invention, it would have been obvious to a person of ordinary skill in the art to use voltage a charging characteristic because the voltage can provide information on state of health and capacity of the battery.

**Regarding claim 27**, the prior art and Fiebig do not disclose wherein said reference voltage is between approximately 80% of a full charge. Kaite discloses in column 3 lines 34 thru 41 that batteries are charged to a reference level, so that the battery is not overcharged with voltage. Further it has been held that when the general conditions of a claim are disclosed in the prior art, it is routine in the art to discover an optimum range. *In re Aller*. 105 USPQ 233.

**Regarding claims 29 – 30**, the prior art and Fiebig do not disclose wherein said current is a current value at a time of approximately 80% of a full charging voltage. Kaite discloses in column 2 lines 55 thru 61 that the batteries are charged with a constant voltage to 80% of the full charge. Further, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. At the time of invention, it would have been obvious to a person of ordinary skill in the art to set the reference voltage from 70% to 80% so as to prevent the battery from being overcharged.

10. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art in view of Fiebig (U.S. 5,539,297) in further view of You (U.S. 6,777,913).

**Regarding claim 28**, the prior art and Fiebig do not disclose wherein the charging voltage/current characteristics relate to a reference current. You discloses in column 4 lines 44 thru 50, that a reference current value is used to end charging of the system, so that it adequately supply charging power to the battery. At the time of invention, it would have been obvious to person of ordinary skill in the art to use current as a reference because it can be used to adequately supply charging power to the battery so that it is not over charged.

### ***Response to Arguments***

11. Applicant's arguments filed 11/16/2005 have been fully considered but they are not persuasive. Regarding claims 1 and 14, applicant argues that the Kaite reference does not meet the claim wherein resuming charging of a first battery until one of a charging current is less than a reference current or the charging current is less than a limit current indicating a

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state of full charge. Kaite discloses wherein the charging current is reduced as it approaches a full level therefore indicating a that the charging current becomes less than a reference current or less than a limit current. That is, as noted above in the rejection, reducing the current after a full charge means that the reference current or limit current is some amount above that reduced amount. The applicant further argues that the Kaite reference does not stop charging the battery based on a second charging voltage/current characteristic. The Kaite reference measures the open circuit voltage of the battery, which the charging is stopped because the circuit is opened and the voltage is measured and charging is resumed. The applicant argues that the Kaite reference does not completely charge one of the first battery or second battery based on the voltage/current characteristic of the first battery and the second battery. In the Kaite reference, voltage is considered and the claim does not preclude charging all the batteries. In addition, if the current is considered, the open circuit voltage provides zero current therefore, the charging is also based on zero current.

12. Applicant's arguments filed 11/16/05 have been fully considered but they are not persuasive. Regarding claims 2 and 3, the applicant argues that Kaite does not disclose or suggest where the reference voltage is between approximately 70% and approximately 80% of a full charging voltage or, where the reference current is a current value at a time of approximately 80% of a full charging voltage. Applicant's arguments are not understood, because the applicant himself states wherein the reference provides a reference voltage of 80% of the charge. Regarding claim 3, the 80% value does not need to be met because the limit requirement does not have to be met, due to the word 'or.'

13. Applicant's arguments filed 11/16/05 have been fully considered but they are not persuasive. Regarding claim 5, the applicant argues that Fujii does not discloses resuming

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charging a first battery of the plurality of batteries until a charging current of the first battery is less than a reference current. Fujii discloses in column 12, lines 1 – 50 wherein the battery pack A resumes charging after a certain reference current is met. The charge capacity calculated as a reference is measured in mAh, which provides is a current, therefore a reference current.

14. Applicant's arguments filed 11/16/05 have been fully considered but they are not persuasive. Regarding claims 6-8, applicant argues that none of the cited references disclose or suggest resuming charging of the second battery until a charging current of the second battery is less than a reference current, or further resuming charging of the second battery until the charging current, or further resuming charging of the second battery until the charging current of the second battery is less than a limit current indicating a state of full charge. See arguments above in #13.

15. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, regarding claims 9 – 10, which claim dependency from claims 5 and 9, respectively, meet the limitations meet by Oyamada, Fujii and You. You discloses in column 3 lines 45 – 65 wherein the battery used is a multi-battery, but for explanation purposes, a dual-battery is described. This means that battery 'B' could indeed mean battery 'C', 'D' and so on. See arguments above.

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16. Applicant's arguments filed 11/16/05 have been fully considered but they are not persuasive. Regarding claims 11-13, see arguments above and Kaite discloses in figures 3 – 5 wherein the batteries are charged with a specified amount of charge, thus providing a gradual increase in current and voltage.

17. Applicant's arguments filed 11/16/05 have been fully considered but they are not persuasive. Regarding claims 15 – 24, applicant argues that none of the cited references disclose or suggest where the charging voltage/current characteristic has one of a voltage gradient and a current gradient according to charging voltage/current of the first battery, or where when said voltage of said first battery gradually rises, said current goes to a constant current, then the gradient goes substantially to zero, thereby said voltage of said first battery having a predetermined gradient. The Tamai reference clearly meets the limitations set forth in claims 15 – 24, in figure 9. Figure 9 shows a graph wherein the slope, gradient, of the current and the voltage. The slope of the voltage gradually rises and the current goes to a constant current and the current gradient, or slope goes to zero. Please see arguments above.

18. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, regarding claims 19 -24 wherein the applicant cites that there is the reference does not disclose or suggest where charging



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voltage/current characteristic has a voltage gradient according to a charging voltage/current of the first battery, see arguments disclosed above.

19. In response to applicant's argument that the rejection asserting that figure 5 is Prior Art, the examiner provides that it was a typographical error and should be changed to the applicant's prior art, figure 3.

20. Applicant's arguments filed 11/25/05 have been fully considered but they are not persuasive. Regarding claim 25, the applicant argues that Fiebig does not disclose a control circuit, but discloses a control unit. The control unit is a circuit that carries out the various tasks of the charging system. Fiebig further discloses in column 3 lines 26 – column 4 lines 62, wherein the battery voltage is measured and the charging is switched to different batteries, then, the charging is ceased after a limiting value has been exceeded. The graph in figure 2 shows that the batteries are alternately charge, which is essentially charging a first battery based on characteristics of the first battery. The claim does not preclude charging the batteries in the same way.

21. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, regarding claims 26 – 30, see arguments above.

22. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by

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combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, regarding claim 28, see arguments above.

### ***Conclusion***

23. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

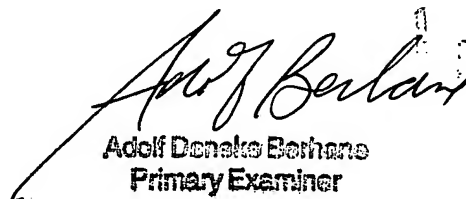
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexis Boateng whose telephone number is (571) 272-5979. The examiner can normally be reached on 8:30 am - 6:00 pm, Monday - Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on (571) 272-2084. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AB

  
Adolf Donato Berhano  
Primary Examiner